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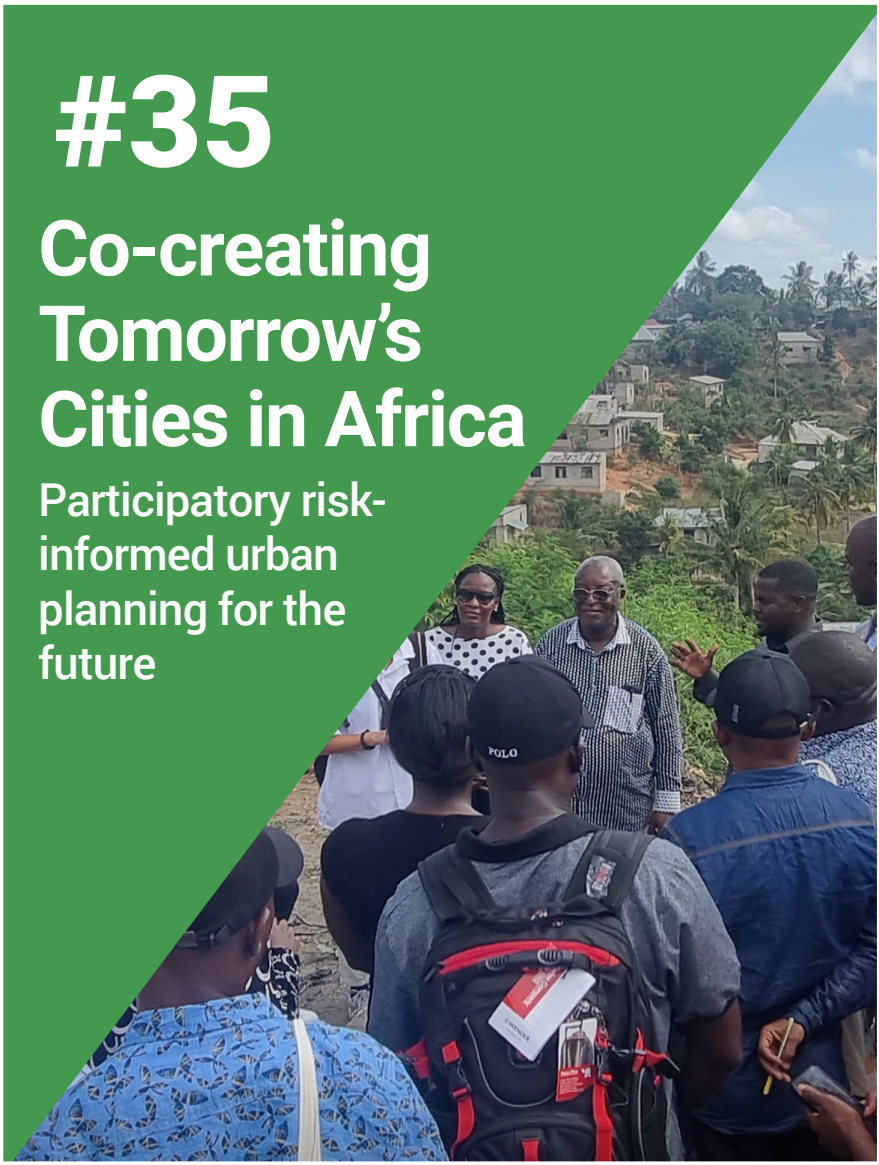
Co-creating Tomorrow's Cities in Africa

Participatory risk-informed urban planning for the future



Peer Learning,
Temeke, Tanzania.
September 28 - 30, 2023

Tomorrow's CITIES
Urban Risk in Transition

Learning UCLG

Credits

Coordination
Ardhi University
International Institute for Environment & Development (IIED)
Temeke Municipality
Tomorrow's Cities
United Cities & Local Governments (UCLG)
UCLG Africa
UCLG Committee on Urban Strategic Planning

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Foreword

From our beautiful city of Dar es Salam, on behalf of the Temeke Municipal Council and the Municipal Management Team headed by our Municipal Director, I wish to take this opportunity to express our gratitude on the many inspirations and experiences that were shared in the learning exchange in September 2023.

As you might be aware, African Coastal cities such as Dar es Salaam suffer most from climate change, which is the most critical issue of our time, with related hazards especially floods, landslides and heat waves, as well as raising sea water level. Our local communities, policy makers, scientific and political leaders are increasingly worried and concerned on how to cope with the growing impacts, and what they mean for the planning of our cities.

Dar es Salaam is a booming city that is growing very fast. However, so far the planning of the city has failed to anticipate the nature and extent of future hazards. But this is not only a technical issue, we have to improve the governance to deal with urbanization in a more inclusive manner. We have learnt that this challenge is shared by many African cities, and we appreciate the open discussions with our peers on what and why has gone wrong and what initiative can get us forward. What we urgently need is concerted efforts to pro-actively intervene, i.e. look forward 20-30 years, in view of the potential hazards and urban growth. For this, we need to review how decisions are taken and implemented.

Tomorrow's Cities and UCLG helped Temeke to revise and revisit its planning practices to better anticipate the combination of rapid urban growth and climate change risks - and importantly to do so in ways that are based on evidence and recognise and include the urban poor. Preparedness and resilient development are not only investment issues, they involve many aspects, such as building control, participatory

decision making, social services, and basic services management. And last but not least, a reliable and solid multi-level governance system that enables proper coordination to make our city responsive and inclusive - honoring its name of Dar Es Salaam - Home of peace.

We look forward to more detailed planning with the Tomorrow's Cities project over the next 6 months. These activities will take into account the lessons learned from our peers during this exchange and documented in this note, and will include continued collaboration with other cities and our local government associations in Tanzania, Africa and globally to foster capacity development and an enabling environment to integrate this future-oriented, participatory, and risk-informed methodologies into our local policies and strategic planning.

Rest assured that you have the political will and commitment of the Temeke municipality to put into action ideas and proposals that will be co-developed with the community members and local leaders, and share our lessons with the wider UCLG/African community. I trust together we can make a difference.

Karibuni Sana to Temeke Municipal Council.

Abdallah Mtinika
Lord Mayor of Temeke

Introduction

Between September 28-30, 2023, around 40 participants joined the peer learning event hosted by the Municipality of Temeke and Ardhi University in Dar es Salaam. The exchange was the result of a collaboration between Tomorrow's Cities Urban Risk Hub, United Cities and Local Governments (UCLG) and UCLG Africa. This collaboration builds on UCLG's city-to-city learning approach and the ongoing efforts by local and regional governments in Africa to localize the global agendas for sustainable development (Agenda 2030), resilience and disaster risk reduction (Sendai Framework for DRR), and climate action (Paris Agreement). Complimenting it with the research and methodologies developed around future-oriented participatory risk-informed urban planning within the Tomorrow's Cities hub, and the "pathways to equality" coming out from the GOLD VI report.[1]

The training and co-learning workshop brought together practitioners, councilors, community persons, NGO representatives, and researchers from over 10 countries in Africa and Europe to learn from each other's experiences – including challenges and lessons – and use that to plan and manage the future cities where new generations will live. It included participants from Blantyre city council (Malawi), Birkama Area council (The Gambia), Kasese district (Uganda), Kisumu County government (Kenya), Sekondi Takobari Metro Assembly (Ghana), Temeke municipality (Tanzania), Freetown city council (Sierra Leone), and Durban/eThekwini municipality (South Africa).

The exchange also counted with the support of organizing partners and facilitators, who play a critical role in forging inclusive and capable enabling environments and bringing forward Local and Regional Governments' (LRG) commitments, including: the Tanzania Local Government Association

[1] In particular, building on the work done on how Renaturing and Democratizing can be pathways to urban and territorial equality promoted by local and regional governments. Know more: https://goldvi.uclg.org/en

(ALAT); United Cities and Local Governments' World Secretariat (UCLG) and its regional section in Africa (UCLG-Africa); researchers from the Tomorrow Cities project, including the local partner Ardhi University (Tanzania); as well as leading experts at University College London (United Kingdom), Boğaziçi University Istanbul (Turkey), and the International Institute for Environment and Development (IIED).

Over the course of three days of engagement, the Temeke Municipality of Dar es Salaam was the point of departure for two types of travel: in space and in time. To travel in space, participants joined a field trip to the neighborhood of Mianzini (to later apply the Tomorrow's Cities methodology) and 'visited' different African cities through a 'peer-reviewed gallery walk' which allowed them to learn from each other. The time travel happened through two exercises: UCLG's Futurilities Game and Tomorrow's Cities methodology – with both exercises happening in a hypothetical future where LRGs and other stakeholders could see and reflect on the short and long-term consequences of their decision-making.

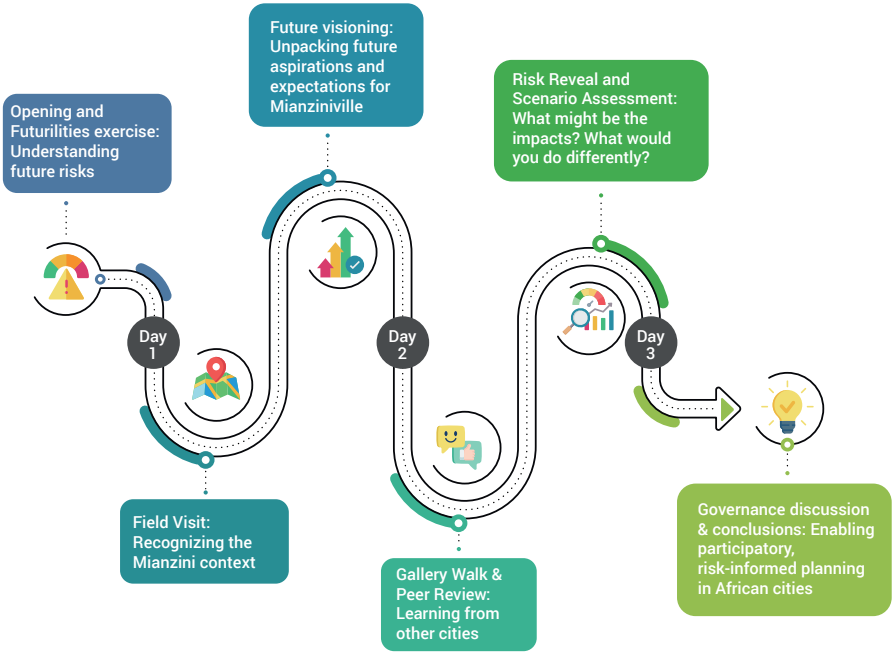


Figure 1: The peer learning's agenda allowed participants to travel in space and in time.

Climate change and urbanization in African cities: Towards better or riskier futures?

Urbanization, and multi-hazard risks –including those generated by climate change– have converged to create a dual challenge for LRGs and city managers worldwide. The recent findings of the Intergovernmental Panel on Climate Change's 6th Assessment Report (2023) confirm a global trend that urban residents have been experiencing firsthand.[2] The risks and losses associated with climate change are on the rise and they disproportionately affect the poorest populations, who are the most vulnerable to these adverse impacts. **Nowhere is this challenge more pronounced than in African cities, which is currently the world's fastest urbanizing region.**

Rapid urbanization, coupled with a predominantly young population, has indeed brought new opportunities for livelihoods, economic, and social advancement. However, for many, the consequences are exacerbating existing inequalities and amplifying risks. Around 85% of Africa's population falls within the lowest wealth quintile, while only 0.3% remain in the wealthiest segment. **The accelerated pace of urbanization in African cities, combined with limited resources and capacity at the subnational level, means that the provision of essential services often falls short of meeting current and projected demands.** Critical services such as sanitation and waste management are far from universally accessible. Over half of the continent's population—almost 700 million people—lack access to a sanitation system. The scarcity of land and housing with basic infrastructure, including potable water and sanitation, forces many low-income groups onto hazard-prone lands, making them susceptible to events such as floods and landslides. Many of these events are likely to be worsened by the effects of climate change, despite African countries contributing less than richer countries to global carbon emissions.

Subnational governments across much of Africa heavily rely on state transfers and grants, funding an average of 58% of their budgets (OECD/UCLG, 2019). **To put things in perspective: cities like Cotonou only have 18 euros per resident per year. In Kinshasa, this is only two**

[2] Access the full report here: https://www.ipcc.ch/assessment-report/ar6/

or three euros. Whereas most large European cities have over 3,000 euros per resident annually. For many LRGs in Africa, land is their most valuable financial resource. However, the lack of updated land registries, ineffective management systems, and high informality levels represent substantial challenges. Issues like land grabbing, land conversion, and property disputes exclude many impoverished individuals from safe land and urban development opportunities. **Top-down and centralized governance approaches are also common and often contribute to limited planning capacities where, among other issues, immediate needs overshadow the crucial potential of urban foresight for long-term planning.**

In this context, where the impacts of climate change and rapid urban growth are already felt, a fundamental and urgent reevaluation of urban strategic planning and policy development is called for. Conventional approaches rooted in extrapolating past experiences into the future are no longer sufficient. As the brunt of risk is felt at the local level, LRGs are best positioned to engage with communities, look into the future with better tools, and seek solutions to mitigate the adverse impacts of hazards. Capacity development at the local government level in Africa requires support from peers, academia, and civil society partners, integrating innovative methodologies tailored to local contexts to address existing gaps and deficiencies. A holistic approach to addressing these challenges could yield valuable lessons applicable in any planning office, local council, or academic institution.

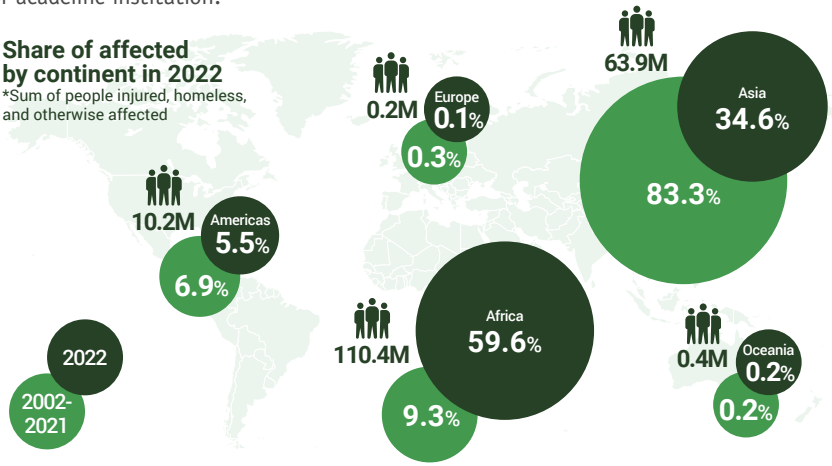


Figure 2: Human impact of disasters by continent in 2022, compared to average share between 2002-2021. Source: CRED, 2023.

Participatory risk-informed planning for tomorrow's cities

Looking into the future in a context of rapid urbanization and climate change requires engaging with a longer time frame for planning and exploring different possible future scenarios. This, in turn, demands robust datasets, systematic procedures for data analysis, and grounded assumptions, among other strategies. While relevant worldwide, such long-term gaze could particularly benefit African cities. In this rapidly urbanizing environment, a great portion of the land expected to be fully urban by 2050 - roughly 30 years from now - is still rural or peri-urban. **This means that forward-looking planning could deeply impact the root causes of risk in Africa: tackling structural inequalities before the bricks are laid on the ground, potentially saving lives and assets, protecting the natural environment and contributing to transformative and sustainable development.**

If cities act fast and in inclusive and equitable ways, there is still a window of opportunity to find futures that are charged with desires and hope; that meet citizens' aspirations while also responding proactively to a changing climate and its associated natural hazards. **Simply put, rather than just asking what future cities could and *will probably* be if current trends continue, an option is to start by asking 'what future cities *should be*'.** Emphasizing desirable future options could uncover synergies among stakeholders who usually struggle to share a common ground in the present, and galvanize purposeful, positive and informed action towards the future.

Debates about good cities are of course not new. Throughout the decades, planners and LRGs worldwide have confronted this challenge and made some advancements. The mainstreaming of participatory planning in many public fora consolidated the lesson that a good city can take different shapes and be achieved differently depending on who is invited to make decisions. Different knowledges and social conditions will potentially lead to the prioritization of different spatial interventions and policies, even when aspirations are conceptually similar. Inclusive participatory planning must strive to answer the question of 'good cities' from different viewpoints. But even if/when successful, participatory planning spaces may still be too focused on immediate needs and aspirations due to short political

cycles and mandates, which last around five years on average. Further, **planning still struggles to account for uncertainty and the needs of future populations and generations.** As demographics change over the years, so will the majority and minority (or marginalized) groups and their interests, which requires that future-oriented participatory planning weighs the needs of both representative groups of the present and those of the future. Moving the object of discussions further away into the future opens up new challenges and opportunities for cities. On the one hand, it is ethically-sensitive to ask stakeholders, particularly marginalized and equity-deprived ones, to put their immediate needs aside –even if for a brief moment– and think of a good city for others in the future. Discussions must be transparent and their advantages must be understood and agreed by all. On the other hand, **overcoming the constraints of the present and dreaming boldly about the future could be a way for stakeholders to collectively imagine change and pursue it as a result.**

Figure 3: Participants in the peer learning engage in a participatory risk-informed planning exercise.

Peer Learning

The Peer Learning event was organized so that participants had both the time to share their local challenges and experiences with risk management, engage with an adapted version of the Tomorrow Cities' methodology that was designed for the event, and exchange reflections and lessons learnt to take back to their territories.

Field visit: Mianzini

The host city for this Peer Learning - the Temeke municipality in Dar es Salaam– provided both a home to the three days of knowledge exchange and a site to learn from: the neighborhood of Mianzini.

Dar es Salaam is a business metropolitan city of Tanzania, situated along the coastline of the Indian Ocean. As of 2022, the city had a population of approximately 6 million people, which accounts for 40 per cent of Tanzania's total urban population, with a rapid population growth rate of 4 per cent per annum. Dar es Salaam shares in many ways the challenges of other African cities; only half of the population is supplied with piped water and less than 10% have access to networked sewage. Informality – at over a 70% rate at present - also imposes a challenge for the city, as it increases the human movement onto hazard-prone areas with inadequate basic infrastructure services.

The metropolitan city is divided into four municipalities, namely Ubungo, Kinondoni, Kigamboni, and Temeke and Dar es Salaam City (former Ilala Municipality). Mianzini, which is one of the 23 wards in Temeke Municipality lies in the southern part of the Metropolitan City of Dar es Salaam (Figure 1), has covers an area of about 912 hectares of land and has a population of about 22,436 people.

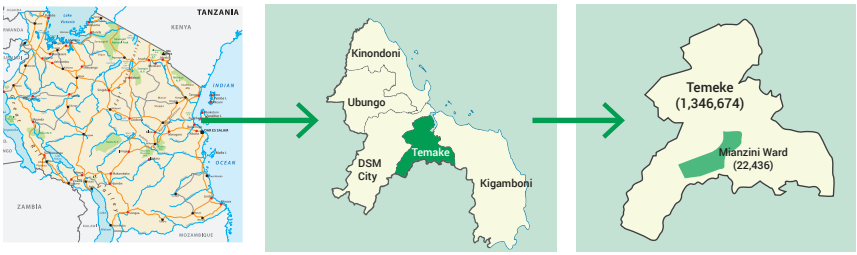


Figure 4: Case Study Area (Mianzini Ward)

At the beginning of the field visit, the Mianzini Ward executive officer provided explanations regarding the socio-economic status of the settlement and its environmental and infrastructural conditions. Participants learnt how the settlement is divided into two main parts: the upper and lower side. The lower section is a valley or ridge-like structure which, during rainy seasons, turns into a small river but also experiencing landslides along its banks. The upper section of the settlement is occupied mainly with informal housing. Moreover, the settlement is characterized by poor basic infrastructure services such as pit latrines and lack of storm-water drainage system which makes it vulnerable to flooding. Participants observed these features and risks, discussed them and carried the reflections towards the following sessions of the Peer Learning.

Figure 5: Participants overlook a valley within the Mianzini settlement during their field visit

Mianziniville: Tomorrow's Cities' future-oriented methodology

The Tomorrow's Cities team designed a role-playing exercise that drew on datasets from the neighborhood of Mianzini. The unique methodology allowed planners and decision makers to explore the links between aspirations, decision-making and risk consequences in a future space which is hypothetical (and therefore safe to explore decisions), but based on real-world datasets.

Tomorrow's Cities works with multi-sectoral partners (local governments, academia, and civil society) across the world to support decision-making through an inclusive and participatory risk-informed planning approach. The full methodology - called the **Tomorrow Cities Decision Support Environment** - is composed of different stages throughout which:

1. City partners present their ambitions for change through a hazard lens;
2. Communities (different groups and identities) are involved to discuss 'good cities' in the future through inclusive and participatory visioning methods;
3. Different versions of good futures are translated as urban scenarios which are validated with the groups;
4. Scenarios are tested against future hazards (with a component to model climate change) and different impacts are calculated;
5. Community groups gather again to learn and discuss the results of hazard modeling;
6. City partners discuss how to absorb the learning from the process into their concrete decision-making environment, including the necessary institutional changes and partnerships to reduce risk.

A period of six months to one year is the recommended if cities desire to implement the actual spatial and policy decisions produced through the process, as this is a timeframe which will enable more accuracy and fidelity of results. Yet the team also disposes of short versions which are learning-

oriented. In these rapid approaches, cities can experiment with pieces of the methodology and exchange meaningful lessons by delving into a fictitious decision-making environment.

For the "Mianziniville" exercise developed for this peer learning, participants were divided into four groups, which represent common identities or interests that they would role play: urban authorities and planners; large business owners and land developers; a women's cooperative from informal settlements; and youth activists from informal settlements. The groups were divided like that so different and alternative future options for decision-making could be explored.

The exercise proceeded as follows, which worked as a simplification of Tomorrow's Cities original methodology.

Stage 1 – Aspirations (desired futures)

This stage consisted of developing visions for the future of Mianzini through the lenses of the groups that participants were role-playing. Each group discussed their aspirations for the future and translated those as assets that were divided across six dimensions: housing and micro infrastructure; macro infrastructure and facilities; social assets; financial assets (jobs and livelihoods); knowledge and culture; and environmental assets. The exercise finished with a visioning statement that captured the priorities of each group.

Figure 6: Desired assets and visioning statement coming out from the policy makers and urban authorities group.

Stage 2 – Decision-Making (possible futures)

Groups were then prompted to transform their aspirations and desired assets into concrete decisions. A pre-designed future land use plan - representing the city's environment in 2050 - and a set of ten different policies were assigned to each group. Each group then had to propose spatial modifications, and choose three out of the ten policy cards to implement in their future city. The combination of the modified land use plan and chosen policies would compose a "Visioning Scenario" - one per group, four in total.

The policies used for the exercise reflected common strategies used to protect or mitigate the effects of floods (the main hazard used in this exercise) on their future city. Namely, policies that tackle exposure, vulnerability, or both. Each 'policy card' contained, besides the name and sector of the policy, the assumptions that were embedded in them: how they would reduce risk, how they would impact land values, what their cost would be, etc.

Figure 7: Some of the policy cards available for each group to choose from.

Stage 3 - Modeling a flooding event in future Mianzini (possible and probabilistic futures)

Overnight, Tomorrow's Cities researchers modeled a flood event over the urban scenarios of each group. These simulations were done using Tomorrow's Cities WebApp - an immersive 'Risk Dashboard' that automates risk assessment by using algorithms that analyze damaged and lost assets and how these interact with each other leading to multiple consequences, called 'impact metrics'. Three metrics were discussed with participants for the purpose of this simplified exercise: number of people displaced, number of children with no access to school, and number of people unemployed. In order to showcase how policies influence impacts, two computations were carried out: i) one with the three chosen policies applied, and ii) one without these policies applied.

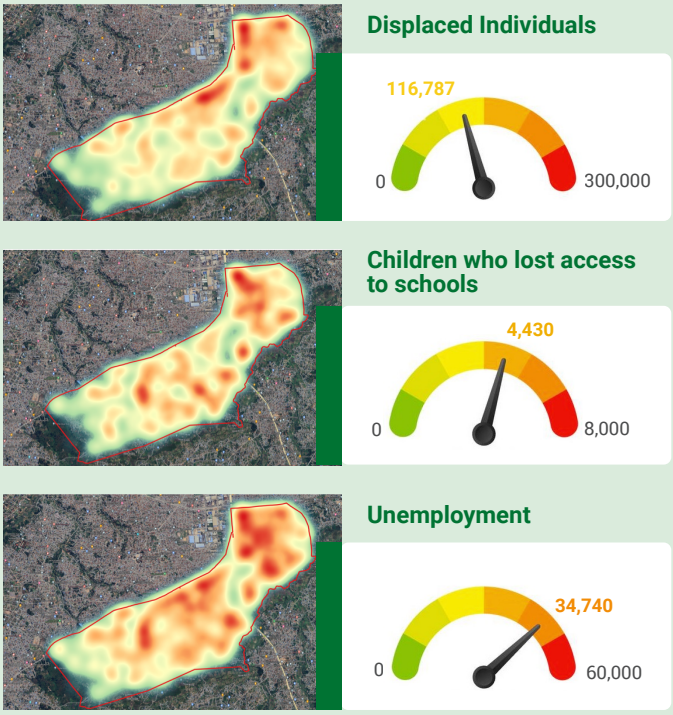


Figure 8: Impact metrics and distribution modeled for scenario proposed by the business group before applying selected policies.

Stage 4 – Consequences (probabilistic futures)

During the last day of the workshop, the computation results were presented as heatmaps reflecting the concentration of the impact metrics. Participants evaluated and compared the results in terms of absolute numbers and spatial distribution of the impacts, to interpret how, why and where their decision-making led to improved or worsened results. Based on this learning, they finished the exercise by defining key actions to reduce risk, governance measures to activate those actions, and barriers and solutions connected to them.

Figure 9: The women's cooperative group reevaluate their decisions and define other measures to reduce risk based on the modeled impacts.

Policy discussion and case studies

Throughout the peer learning, the future became a wider and flexible time horizon that goes beyond what conventional planning cycles often establish. This was the spark used to motivate a concluding discussion , building on the experiences and realities of participating cities, and guided by the following questions: What is the added value of incorporating a longer-term future lens into planning processes? How can LRGs leverage this approach to expand the collective imagination of what future cities are desired, and which desired futures are possible in light of hazards and climate change? Can this thinking foster new policy approaches that contribute to Renaturing and Democratizing our future cities? And importantly, if this new approach was to be adopted by a local or regional government, what implications would it have on local governance and what reforms would it require?

Policy making, planning and data

During this reflection, participants emphasized **the need for integrating disaster risk reduction more explicitly into African cities' policy-making and planning practices.** The participants recognized that integrating future-oriented, risk-informed, and participatory planning into local government operations requires the support of both political leaders and technical teams. It necessitates inclusive consensus-building and political backing within the local council. Moreover, participants identified the need for institutional changes within the structure of local governments to ensure that risk mitigation becomes a core responsibility. This may involve revisiting the roles of different departments to align them with future planning that incorporates risk mitigation.

Participants paid particular attention to revisiting planning departments: **stressing the importance of including risk reduction capacities and tools into the practice and procedures of planning departments in African cities.** With the exception of certain master

plans, planning practices tend to follow short political cycles of around five years. This means that planning is usually responding to immediate or short-term challenges instead of looking strategically into the future. Even when longer time frames are considered, they are not sufficiently backed by scientific evidence, forecasts and simulations. These long-term-based timeframes must incorporate meaningful processes of participation, which could lead to tensions, particularly in hazard-prone or environmentally sensitive areas. In particular, regarding how to balance the immediate needs of groups experiencing hardship with the care for the environment and concerns of future generations that are not yet here.

Blantyre (Malawi)

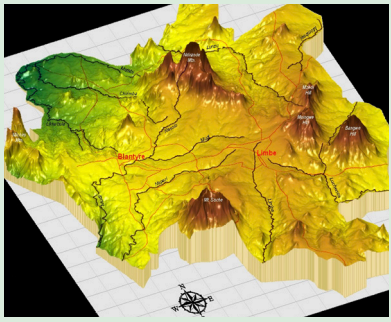
Reviewing Urban Structure Plans to account for climate impacts

In February 2023, the City of Blantyre was heavily hit by Tropical Cyclone Freddy. The Cyclone is widely regarded as the City's worst disaster in living memory and exposed the City's lack of preparedness before, during and in the aftermath of the Cyclone. Whilst the City has a Disaster Risk Management (DRM) institutional framework, the City lacks capacity to steer the DRM cycle due to limited training and equipment. The City is currently reviewing its urban structure plan and has incorporated the DRM framework in the review. It has also embarked on relocation of Cyclone Freddy victims to safer areas of the City.

This process is being carried out through a risk assessment and analysis of exposure and vulnerability/capacity to multiple hazards such as floods, droughts, earthquakes and landslides. The risk estimates are expressed on AAL (deterministic risk metric and risk indices) and are the impact of hazards modeled using several methodologies (Coupled 1D-2D hydrodynamic, Oasis Loss

Modelling Framework (LMF), QGIS model, InaSAFE, GeoNode, GeoServer and InaSAFE) including 3D models to better understand real impact on the ground. The process and results are being shared with stakeholders through consultation and validation meetings, interviews. Risk Atlas Maps are being shared with the local community centers.

Throughout this process, the City has identified several persisting challenges which include weak local institutions despite an ongoing process of decentralization; lack of capacity to manage data and knowledge of local impacts of Climate Change; informal growth of the City fueled by rising urbanization. Key lessons learned include cross sectoral joint plans and strategies; benefits of developing an integrated hazards data and mapping system and the difference it makes to integrate the analysis of the long-term macro-economic and related budgetary impacts of disasters in its decision-making process.



Moreover, participants noted how **incorporating a future perspective means that new information about the intensification of climate change-induced hazards needs to be periodically updated into plans.** This means that planning processes should be made more flexible and less costly to accommodate more frequent updates. Inclusive and truly participatory urban planning and policy making must confront those challenges, using innovative design and scientific tools to foster debates and responses that are informed by evidence and negotiated collectively.

The importance of data was a central theme: it was agreed that data governance was the entry point for kickstarting future-oriented, risk-informed, participatory planning processes in their local governments**. Moreover, participants reflected on the need to foster a culture in which being exposed to evidence triggers a change in our initial thoughts.** They posed the question: how to promote such a culture shift? Could future-oriented, risk-informed planning be a lever for this? The Tomorrow's Cities methodology illuminated the idea that risk is the outcome of complex interactions between various factors, including hazard events, exposure, vulnerability (both physical and social), and capacity. Participants emphasized that comprehending future hazards necessitates having access to ample data and knowledge. This data is crucial for modeling urban and hazard trends, as well as monitoring these events and the responses linked to them. The accuracy, completeness, and consistency of the data are also crucial, given the need to understand vulnerability and other related factors.

Participating cities shared their experiences in employing various data collection methods and engaging with communities in participatory planning and risk assessments. Taking a forward-looking perspective, the discussion highlighted the need for a robust data collection mechanism that not only addresses current requirements but also anticipates and mitigates future risks. This requires high-quality, disaggregated data that accurately represents the complexities of individual local contexts.

The political nature of data was also raised. Participants were committed to **building data collection and application processes which are problem-driven, community-led and able to mobilize diverse sectors of society.** From a "future" perspective, however, participants expressed concerns about community fatigue resulting from data

collection processes. In order to address this issue, participants stressed the importance of institutionalizing accountability mechanisms and empowering communities to link their data contributions with decision-making processes. They also emphasized the need to adopt open data schemes and build data management capacities within LRGs, rather than outsourcing these activities.

Durban (South Africa)

A Collaborative Approach to Strategic Planning for Inclusive Outcomes

The eThekwini Municipality in Durban, South Africa, exemplifies a commendable outcomes-based approach to urban strategic planning, showcasing a comprehensive integration of diverse planning mechanisms and sectoral processes. Central to this approach is a strong commitment to citizen engagement and the cultivation of long-term visions, both of which are meticulously embedded in the overarching municipal spatial strategy. At the heart of the city's strategic framework are the Integrated Development Plan and Spatial Development Framework, which not only articulate the city's aspirational goal of becoming "Africa's most caring and liveable city by 2030"; but also encapsulate strategic goals derived from the District Development Model (One Plan). These plans emerge through robust community engagement at the district level, ensuring that the policies and investments crafted are attuned to the needs and aspirations of the local populations.

The city adeptly navigates the complexities of multi-level governance, fostering alignment between national, provincial, and municipal initiatives. A noteworthy facet of eThekwini's planning strategy is the incorporation of Community-Based Plans, a mechanism that fosters transparent and participatory visioning processes, allowing communities to actively shape their development trajectory and resource allocation. In tandem, the city embraces the Cities' Infrastructure Delivery and Management System (CIDMS), an

asset management oriented framework. CIDMS enables the city to optimize service delivery, minimize risks, and control costs across the life cycle of infrastructure assets, reflecting a commitment to efficiency and sustainability.

eThekwini Municipality serves as a notable model for urban strategic planning, combining visionary goals, community engagement, and innovative mechanisms for infrastructure management and risk adaptation. The city's commitment to building a resilient and inclusive future stands as a testament to the transformative potential of outcomes-based urban planning. However, eThekwini Municipality acknowledges the unique challenges posed by future-oriented, risk-informed planning in socially and economically vulnerable communities. In response, the city emphasizes the establishment of trusted governance platforms, recognizing that building resilience requires not only infrastructural solutions but also the cultivation of community trust and active participation.

Multilevel governance and partnerships

The relationships that exist, on the one hand, between LRGs and their national governments, and on the other, between LRGs and other local actors, are fundamental to participatory, risk-informed planning. Incorporating a longer time frame perspective would require reinforcing the sustainability in time of those relationships, and the constant negotiations and trust building they entail.

With respect to multilevel governance, some of the participating cities highlighted elements in their participatory processes and in their risk assessments that directly stem from the decentralization frameworks of their countries. This was for instance the case of Freetown, who stressed decentralizing the provision of local public services as an integral part of their risk management strategy. In the Brikama Area Council, coordination between the local, regional and national government levels lies at the core of the participatory dimension of their risk management approach. Such coordination happens both at the political and technical level, coordinated by the Area Council and bringing together the Office of the Governor, the National Disaster Management and Environmental Agencies, the Departments of Physical planning and housing, and Community Development, and the Regional Security apparatus.

Participants also discussed **reviewing national frameworks, and national urban policies in particular, so that they require local, risk-informed plans to operate with longer time spans and more flexibility.** Local plans, including risk assessments, are oftentimes either mandated by national governments, or are required to align with national plans, however local planning cycles usually span periods more similar to 5 or 10 years than to 50 or beyond. Promoting a change in the approach could reinforce mutual changes in planning approaches between the different levels of government.

Entering into new forms of partnerships with local communities and the academia was also raised as a lever for planning departments within LRGs to work with longer time frameworks. Scientific partnerships can provide valuable insights and data to consider long-term trends and risks. The engagement with local communities was, like data, an issue central to all discussions. Participants shared experiences of LRGs which were piloting

Freetown (Sierra Leone)

Decentralization of functions of basic service delivery, stakeholder engagement

Assessing hazard risk in Freetown involves a systematic process that combines data analysis, expert knowledge, multilevel coordination, and community input. The methods and tools used include hazard identification, data collection and analysis, vulnerability assessment, risk assessment and mapping, risk communication, and risk reporting, with a focus on landslides and flooding as the most common hazards. The city believes that the key to success in co-creating tomorrow's cities lies in collaboration, data-driven decision-making, and a commitment to inclusivity, ensuring that the urban planning process addresses the needs and vulnerabilities of all residents while safeguarding the city's future against climate and disaster risks.

Sharing the assessment among different stakeholders and partners at different levels of government such as the National Disaster Management Agency - Sierra Leone, the Meteorological State Agency, civil society organizations such as Catholic Relief Service (CRS), different local government departments and other partners is a critical part of this process. This is done through stakeholder engagement, public meetings, educational campaigns, local media, workshops, and multilingual materials to ensure effective disaster preparedness and response. The decentralization of functions of basic service delivery to local communities is also an important part of the Area Action Plans aimed at upgrading informal settlements and providing a social safety net to vulnerable families and individuals.[3]

[3] For more information about the Action Area Plans, the Case-Based Contribution "Participatory Planning: The role of Community and City Learning Platforms in Freetown" by the Sierra Leone Urban Research Centre and Njala University to the GOLD VI Report is available here: https://strapi.goldvi.uclg.org/uploads/ch9_democratizing_57_b28111be0b.pdf

entering into partnership agreements with their local communities, for instance through the adoption of Memorandums of Understanding. These are based on local actors' activities around data collection, information sharing, self-enumeration, and service provision, among others. The relation with humanitarian actors was also discussed, stemming from the need to expand the time frames and sustainability of their actions. Participants also discussed the need to partner with insurance companies to access data on future scenarios and investment risks. However, these partnerships need to be carefully analyzed to ensure they benefit LRGs and don't lead to unfavorable situations. It was noted how there tends to be information asymmetries between such companies, who own robust datasets, and LRGs. Moreover, the need for continuous spaces and strategies for long term engagement, not only one-time events, was raised, so as to provide opportunities for partners to meet and discuss future-oriented planning in a more consistent way.

Kisumu (Kenya)

Partnerships with community & student co-researchers to advance local assessments and define actions

Kisumu is the third largest city in Kenya with around 570,000 residents. It is one of the fastest growing regions in the country, and its population is expected to reach 770,000 by 2030. Its rapid urbanization has come with development challenges that impact living conditions, human dignity, and environmental sustainability. To confront this, the local government has partnered with Slum Dwellers International (SDI) Kenya to implement a participatory vulnerability mapping and climate risk assessment in five of its informal settlements.

The assessment used Geographic Information Systems (GIS) and remote sensing technologies, together with household surveys, focus group discussions, and community workshops to gather and analyze climatic, geospatial, and socio-economic data, and correlate climate variables with vulnerability. The process pinpointed areas and populations most at risk from hazards, such flash and riverine floods, high temperatures and heat waves, emergence of new pests and diseases, and lake level rising.

Local community members and university students were engaged and trained for this process. The final results were shared with the overall community, including through Ward Atlas made available in local community centers, and Climate Action stories documenting and amplifying the voices of local Climate Champions. The mapping paved the way to the development of short- and long-term plans for addressing climate change impacts, and the proposal of locally led climate change investments.

This kind of existing collaborations are a great place to integrate a future-oriented approach, recognizing how vulnerability mapping methodologies require regular updates and improvements for better decision-making and adaptive planning, taking into account the increasing frequency and intensity of climatic events.

Management and finance

Finance and local government management are pivotal for LRGs wishing to embark on a future-oriented, participatory planning approach to mitigate climate change-intensified risks. They enable the allocation of financial resources for climate change mitigation, budgeting for resilience-building activities, risk assessment, and long-term financial planning. Effective finance and management also support investments in sustainable practices, public engagement and participation, capacity building, and the leveraging of external funding. Yet, the discussion brought to light several important points that not only relate to the future but also have immediate implications for the present.

A future-oriented perspective has far-reaching implications for participatory budgeting processes. It alters the landscape of actors who should be involved in these processes. Beyond elected officials and government employees, the input of experts, academics, and community representatives who can envision the long-term impacts of budget decisions becomes crucial. Those who represent large demographics and interests in the future should also be considered, as these groups and their needs might weigh differently in future budgets as they do in the present. In sum, engaging a diverse group of stakeholders can lead to more balanced and forward-looking budget allocations.

Kasese (Uganda)

Mobilizing resources to meet today's needs and face tomorrow's risks

The city of Kasese is often hit by floods, landslides, droughts, and hail and wind storms. With its focus on disaster management, prevention and response, the city has been able to increase community members' participation in planning, budgeting and decision making processes. It has also increased knowledge and

skills related to disaster management, and it has contributed to changing mindsets with respect to environment protection.

However, an overwhelming demand for services, limited funds and lack of specialized capacities, tools and equipment have prevented the city from further integrating risk into its overall planning strategy, let alone risk-oriented planning that is future-oriented. As such, the city depends on the mobilization of local communities, public-private arrangements and partnerships, and on advocating for resource mobilization, including from the central government. Using multi-sectoral participatory approaches to pool together limited resources, and increasing accountability and transparency to build confidence and trust among stakeholders were also identified by the city as opportunities to move forward.

Balancing the budgetary trade-offs that arise from prioritizing future-oriented investments is a significant challenge. Local governments often face the dilemma of whether to invest in policies and infrastructure projects that address immediate needs or to allocate resources to mitigate the impacts of future hazards. A future-oriented perspective necessitates considering the long-term benefits of investing in resilience and sustainability. It requires striking a delicate balance that ensures both current and future needs are met without compromising one for the other.

Local financial autonomy is crucial for implementing a future-oriented perspective. Strengthening own-source revenues, particularly through local tax systems, can be a compelling argument. The premise is that securing the future safety and resilience of the community can pave the way for economic growth. In this regard, LRGs may also consider improving access to capital markets and taking on loans to fund transformative projects that benefit the community in the long run.

Sekondi-Takoradi (Ghana)

Smart governance system for more effective development control

In rapidly urbanizing areas, risk assessments, building regulations and plans do not necessarily translate into reality, due to a lack of compliance and lengthy bureaucratic processes not keeping up with the rate of new buildings and urbanization. Sekondi-Takoradi's physical planning department has introduced a smart governance system that allows to improve transparency and reduce turn-around time in the acquisition of development permits. This is a good example of how better management is critical to facilitate risk-informed development.

The city, with a population of around 250,000, procured and installed a geospatial platform, and established a technical working group to enhance the processing of development and building permits: ensuring responses to permit applications within 30 days and improving monitoring. The program included building the capacity

of building inspectors and revenue collectors, the procurement of surveillance drones to ensure real time monitoring, and ample community outreach, including through radio and media, community organizations, traditional authorities, prospective builders and property owners.

The project and the buy-in from the community through this open communication has allowed the city to increase compliance with building regulations and prevent further encroachment of wetlands and open spaces. At the same time, more formal and updated licenses have allowed the local government to collect more tax, while the community and property developers are more encouraged to invest and understand the value of protected areas.

To ensure a future-oriented perspective in investment decisions, participants raised the point of how local governments should include the costs associated with potential impacts of future hazards when evaluating investment proposals. This holistic approach to decision-making ensures that the true long-term consequences of investments are considered, guiding local governments in making sustainable choices.

With respect to local government management, participants emphasized the need for improving the skills of local government officials. They pointed out that it is rare that officials had the skills required to adopt a future-oriented, risk-informed and pro-poor and equity-oriented approach to planning. Moreover, participants turned to the need of attracting youth to work in local government. They discussed how engaging universities to support staff development can aid in nurturing a talent pool equipped to tackle the complex challenges that come with a future-oriented perspective. Furthermore, participants also discussed how this dynamic could positively impact local government management from a larger perspective: as adopting a future-oriented perspective holds the potential to attract skilled professionals to work in local governments.

Key lessons & recommendations

The gap between current capacity and the structures, skills and data needed at the local government level to plan for a future coming quickly towards us was at the heart of the discussions in this peer learning. The Tomorrow's Cities approach has revealed the enabling environment necessary to prevent ongoing urbanization trends from exacerbating existing risk and avoid additional exposure to growing climatic and other hazards across eight participating cities. Seven key recommendations for cities in sub-Saharan Africa are outlined below.

1. Balance past, present and future in planning

Knowledge generated by past events may not be enough to understand the future. Likewise, current populations and governments must find ways to balance the needs of the present with policies that look at impacting and protecting future generations. This requires both complementary future methods (qualitative- and quantitative-oriented) and inclusive and educational processes that contribute to informed and democratic decision-making. Managing the risks and urban issues of today may eventually increase risk or inequalities for others in the future, or eventually damage natural environments and ecosystems. These are complex trade-offs which should involve diverse social and urban groups –particularly those who are marginalized– but with an attention to the fact that the social composition of the city may change.

2. Establish robust, meaningful and open databases for understanding future risk

LRGs need the capacity to understand what are the pressing social, urban and hazard trends in their cities or regions –aging, migration, renting patterns, intensifying drought or flooding– and how these may inform participatory planning processes in the present towards the future. Forecasting and scenario techniques need to rely on quantitative datasets, and multi hazard and impact modeling should ideally rest on an in-depth understanding of the environmental conditions of each context. Building robust and open databases, while also planning to deal with data scarcity should guide the work of cities in this sense. Yet, all of this should be understood against people's and communities' preferences and desires, which raises the need for qualitative data collection and management approaches. For instance, different hazard scenarios can be simulated to animate discussions. Which ones matter more to people? Why? Which impacts (losses, damages, etc) seem more relevant to particular groups? Why? Data protocols and procedures should be robust and reliable, and yet ideally guided by the needs and aspirations of multiple stakeholders.

3. Inclusion, equality and transparency are key for democratic futures

When the future horizon is expanded, participatory planning brings up new questions in terms of inclusion, equity and transparency. Inclusion here refers to the fact that different voices should be heard during decision making, with an attention to power imbalances. Equity in this context refers to the outcomes of risk-informed planning, that is, how risk is distributed across space and society. Yet, those groups included today may not be representative of urban inequalities tomorrow. Transparency on the other side requires planners, policy makers and scientists to openly explain and engage residents in the processes through which local aspirations are transformed into concrete land-use and urban policy proposals, and multi hazard risk scenarios are produced.

4. Address decision-making tensions and trade-offs to avoid hidden lock-ins and identify cobenefits

A key lesson from this event was that desired future scenarios may look different depending on who –which groups– is called to make decisions. Some specific spatial and policy choices may reduce overall risk, but some specific spatial and policy choices may reduce overall risk but increase or push risk towards marginalized areas. Moreover, risk seldom can be entirely eliminated, and there are often tensions and trade-offs between shorter and longer-term risk reduction measures. Cities must adapt to climate change and hazards, learning to reduce risk strategically and living with some acceptable levels of risk. But what does acceptable means? And acceptable for whom? This is a subjective issue which requires awareness raising and constant processes of negotiation of the meanings of risk and their implications.

5. Strengthen local partnerships to build capacities and address future risks

In these processes, LRGs can benefit from building collaborative partnerships with local academic institutions, community organizations, humanitarian agencies, and other stakeholders to enhance future-oriented, risk-informed planning. These partnerships provide access to a wider range of expertise, resources, and data, crucial for addressing complex challenges related to climate change and hazards. Engaging with local communities through partnerships also ensures that their perspectives are integrated into long-term planning, fostering sustainability and maintaining a dialogue that evolves with changing information and challenges. These collaborations also enable LRGs to access vital data on future scenarios and investment risks and expand the pool of perspectives informing decision-making. However, it is essential to address challenges like information asymmetries, community fatigue, resource allocation, and regulatory considerations to maximize the benefits of these partnerships.

6. Integrate the cost of tomorrow's risks into today's decision-making and financial planning

LRGs can benefit from a multifaceted approach to finance future-oriented, risk-informed planning, recognizing the complexities of addressing climate change impacts and their underlying causes. This approach involves diversifying funding sources, from improving local tax collection to leveraging external financing and accessing capital markets, in order to allocate resources for long-term resilience-building activities and risk reduction. Insurances can also contribute to this process, by integrating risk-sensitive decision planning into private and public investments and development. LRGs can also collaborate through multilevel governance structures with neighboring municipalities, regional and national governments to align strategies and plans with broader regional and national frameworks.

7. Continue co-creating knowledge and agendas for future research and actions

Engaging with and learning from other cities through peer learning processes provides opportunities not only to exchange experiences and build the capabilities of LRGs to address the needs of the present and the future, but also to identify gaps between ambitions and local practice, putting the spotlight on governance and policy gaps that can help guide future research and advocacy processes. These co-creation and peer learning processes, developed in partnership with academia, civil society, and local city networks, are critical for the localization of Global Agendas - highlighting the actions and needs at the local level, as well as to advance local and regional governments' own visions and commitments as exemplified by UCLG's Pact for the Future of People, Planet and Government.

Next Steps

City networks, local governments' associations, academic and institutional partners can support capacity building of municipalities through programs such as Tomorrow's Cities. However, outreach and efforts to foster more learning "in real time" by public servants is important given the scale of problems and number of cities affected. As next steps, the partners engaged in this peer learning will continue to collaborate, sharing the above lessons and facilitating access for city leaders and planners. Specifically:

- National and regional local government associations connected to UCLG, and their members, can inform and promote lessons using events and organizing short learning opportunities around different aspects of the future-oriented, risk-sensitive and participatory approach to planning discussed in this note.
- Universities connected to Tomorrow's Cities can continue to support cities in scenario building and future-oriented risk assessments, while also documenting and producing contextual and actionable research around the challenges and progress faced by LRGs.
- UCLG's Committee on Urban Strategic Planning will address critical findings in policy spaces and will follow up with webinars and exchange opportunities to share knowledge and progress regularly.
- UCLG will make efforts to connect the findings of these different exchanges to develop an action oriented agenda on climate change and future visioning.
- Tomorrow's Cities will develop a simple communication and learning methodology as part of its legacy strategy, in order to reach out to more political leaders and technical staff.

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